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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/802,808 03/18/2004 Makoto Momota Q80433 5096

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SUGHRUE-265550
2100 PENNSYLVANIA AVE. NW
WASHINGTON, DC 20037-3213

EXAMINER

GILLIAM, BARBARA LEE

ART UNIT	PAPER NUMBER
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1752

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS 01/08/2007 PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/802,808

Applicant(s)

MOMOTA ET AL.

Examiner

Barbara L. Gilliam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The amendment filed October 16, 2006 has been entered and fully considered.
2. Claims 1-3 and 6-17 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 6-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uetani et al. (US 2001/0044070 A1) in view of Kodama et al. (US 2003/0017415 A1).

a. Uetani exemplifies a resin A1 comprising the repeating units of 2-ethyl-2-adamantyl methacrylate, 3-hydroxy-1-adamantyl methacrylate, and 5-methacryloyloxy-2,6-norbornanecarbolactone (resin synthesis Ex. 1). The monomers were synthesized from (meth)acrylic acid ([0094]-[0097]). Resist composition were prepared by admixing the said resin with an acid generating agent, a quencher ([0115]-[0119]) and a solvent mixture of 57 parts propylene glycol monomethyl ether acetate (PGMEA) and 3 parts γ -butyrolactone ([0126]-[0128]). See also Table 1. The formed composition was coated on a silicon wafer, exposed with an ArF excimer stepper and developed with aqueous

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TMAH ([0129]-[0130]). See also resin A2-A6 and AX. It is the examiner's position that 5-methacryloyloxy-2,6-norbornanecarbolactone meets the limitations of claimed formula (VI); 3-hydroxy-1-adamantyl methacrylate meets the limitations of claimed formula (All) and the limitations of claim 8 would have been obvious in view of the 2-ethyl-2-adamantyl methacrylate. Further, PGMEA meets the limitations of a propylene glycol monoalkyl ether carboxylate and γ -butyrolactone meets the limitations of a cyclic ketone. It would have been obvious to optimize the amount of solvents, including γ -butyrolactone. MPEP 2144.05. Uetani et al. do not teach the required acid generator combination however it is the Examiners position the teachings of Uetani et al. are not limited to the acid generators taught therein ([0030]). Therefore it would have been obvious to one of ordinary skill in the art to use any well known acid generator(s) including the preferred combination of Kodama et al., a triarylsulfonium salt and phenacylsulfonium salt ([0110]-[0115]) with reasonable expectation of preventing sensitivity fluctuation ([0116]). Uetani further teaches that the taught composition may also contain various additives such as sensitizers, dissolution inhibitors, and surfactants ([0090]).

Response to Arguments

5. Applicant's arguments filed October 16, 2006 have been fully considered but they are not persuasive.

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a. Applicant's arguments concerning the rejection under 35 USC 102(b) and 35 USC 103(a) over Kodama et al. are persuasive. Accordingly, the rejections are withdrawn.

b. With respect to the rejection under 35 USC 103(a) over Uetani et al. in view of Kodama et al., the Examiner maintains the present invention is obvious in view said combination. The declaration evidence submitted by Applicant is unpersuasive because, although the result obtained are arguably superior and unexpected with respect to cracking and dry etch resistance Applicant has not establish said results have a significant that is equal to or greater than the expected beneficial result of sensitivity. See MPEP 716.02(c) and *In re Nolan*, 553 F.2d 1261, 1267, 193 USPQ 641, 645 (CCPA 1977).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

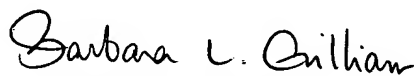
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara L. Gilliam whose telephone number is 39. The examiner can normally be reached on Monday through Thursday, 8:00 AM - 5:30 PM.

a. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

b. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Barbara L. Gilliam
Primary Examiner
Art Unit 1752

bg
January 3, 2007